

difficulty in ascertaining the exact place of the Sun at the time mentioned.

The result then of this investigation, as far as I have carried it, is, that a Solar Eclipse is recorded in the most ancient Chinese historical work extant, as having occurred in the reign of Chung Kang, of the Hea dynasty, which Eclipse is more circumstantially mentioned by subsequent historians as having taken place in the first year of that Emperor, being the fifty-ninth year of the eighth cycle. That according to their mode of reckoning, the date of this Eclipse, expressed in our numbers, is 2158 B.C. and that it occurred in the ninth month of that year, in their division Fang, that asterism being part of our constellation *Scorpio*.

I have thus given the account of this Eclipse, simply as it occurs in Chinese historical works of reputation. There are, however, discrepancies in the year of the founding of the Hea dynasty, both in Chinese and European authorities, which may require attention. Leaving out one Chinese author, whose difference is upwards of 200 years, I find the first year of Yu, the founder of that dynasty, was according to one authority 2206, and according to the historians I have followed in this investigation 2204 B.C. According to what may be called European authorities, we have in Du Halde 2208, and in Gaubil 2205, as the date of that event. We have here then a difference of about four years, within which limits, I presume, should a Solar Eclipse be found to have occurred, satisfying the conditions as to time and place, it may reasonably be considered as that recorded in the curious and ancient book from which the preceding account has been taken.

I have also thought it necessary to give important passages in the original characters, knowing from experience the extreme difficulty of ascertaining with any degree of certainty the actual words intended to be employed, when their equivalent sounds are expressed in European letters only.\* Whether a Solar Eclipse, visible in China, actually occurred at or near the time mentioned must be left for others to determine; and I can only say in conclusion, that should such be found to have been the case, it will afford a strong evidence of the general veracity of the early annals of that very ancient and interesting people.

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*On the Value of the Solar Parallax deduced from the  
Lunar Tables. By P. A. Hansen.*

In the *Monthly Notices*, vol. xxiii. No. 7, Mr. E. J. Stone discusses different values of the co-efficient of the Parallaxic

\* For the loan of the Chinese type employed in this paper, the Society is indebted to Mr. Watts, Printer, of Crown Court, Temple Bar.

Equation of the Moon, and closes his note with the following words:—"It would be a point of interest to determine whether Professor Hansen's theory would bear any considerable increase in the mean Solar Parallax." I fulfil this desire with all the more pleasure, since the determination of the Solar Parallax from my Lunar Tables may be obtained by means of data which have been already published.

On page 177 of the *Darlegung der theoretischen Berechnung der in den Mondtafeln angewandten Störungen*, it will be found, that in my calculation of perturbations for the ratio of the major semi-axis of the orbits of the Earth and Moon, I have adopted the following value:—

$$\log \frac{a}{a'} = 74^{\circ}34'757.$$

which gives, for the co-efficient of the Parallaxic Equation  $121''\cdot368$  (Lunar Tables, p. 8). By comparison with observations, however, it results that all inequalities, theoretically calculated with the above value of  $\frac{a}{a'}$ , must be multiplied by the factor  $1\cdot03573$  in order to conform to the observations. When, therefore, the above-mentioned co-efficient is multiplied by this factor, it gives  $125''\cdot70$ , which coincides very nearly with the value which Mr. Airy has obtained by the Altazimuth.

Further, in the Lunar Tables (p. 4), the constant of the Parallax of the Moon is given as  $=56'59''\cdot57$ . This being multiplied by the above value  $\frac{a}{a'}$ , we have  $8''\cdot66$  for the Solar parallax, which has been adopted as the basis of the theoretical calculations. This, again, being multiplied by the above factor  $1\cdot03573$ , the Solar Parallax, determined by the elaboration of the Lunar Tables, becomes  $8''\cdot97$ . This value coincides very nearly with that which has been determined by the last opposition of *Mars*.

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### *On the Companions of Sirius.* By M. Goldschmidt.

(Extract from a Letter to Admiral Manners, Secretary of the Royal Astronomical Society.)

I have seen with satisfaction the insertion of my letter from M. l'Abbé Moigno's journal, *Les Mondes*, in your *Monthly Notices*, No. 5, vol. xxiii. I hope that *Sirius* will be observed next autumn by astronomers provided with large telescopes, to verify the minute stars I saw in its following vicinity. As long as *Sirius* was high enough above the horizon, I could see them; but afterwards I perceived only mere glimpses of light,